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08/098,896 07/29/93 SATO

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EXAMINER

SARAS, S

ART UNIT

PAPER NUMBER

2609  
DATE MAILED:

10/07/94

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.                 | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/>   |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-9 are pending in the application.  
Of the above, claims 5 are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☒ Claims 7, 8 and 9/8/7 are allowed.
4. ☒ Claims 1, 2, 3, 4, 6, 9/6 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).
12. ☒ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☒ not been received  
☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

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**Part III DETAILED ACTION**

***Claim Objections***

1. Claim 5 objected to under 37 C.F.R. § 1.75(c) as being in improper form because a multiple dependent claim can depend from another multiple dependent claim. See M.P.E.P. § 608.01(n). Accordingly, claim 5 has not been further treated on the merits.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 are rejected under 35 U.S.C. § 102(b) as being anticipated by LaBiche et al.

LaBiche discloses an input apparatus H with detecting means A, B, C, A', B', C' (i.e. six accelerometers shown in fig. 2) which detect the physical displacement of a given movement in space. Information generating means for generating position specifying information based on the detection results is disclosed by Signal PreProcessor Computer 40 in fig. 4. Transmitting means for transmitting the position specifying information generated by said information generating means is

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disclosed by block 113 in the flow diagram of fig. 7. As to claim 1 detecting displacement, claim 2 detecting velocity and claim 3 detecting acceleration, these are all disclosed by LaBiche, see fig. 5, 46.

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

5. Claims 6 and 9/6 are rejected under 35 U.S.C. § 103 as being unpatentable over LaBiche et al.

As to LaBiche see previous discussion. As disclosed above LaBiche discloses the motion detecting means and the transmitting means.

LaBiche does not disclose the resting state detecting means.

It would have been obvious to one skilled in the art that LaBiche could be altered to detect resting state. Since LaBiche

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discloses the use of accelerometers it is inherent in the device that the resting state is when there is not actuation or detection of movement. Further, since LaBiche is directed to a hand held input device, it would have been obvious to include a resting state detection method so the system could power down automatically so power or energy can be saved. By providing a second detector with a reference voltage the resting state could be detected when the remainder of the circuit or computer is in a wait or power saving mode. As to claim this is disclosed by LaBiche wherein various buttons or actuators can be placed on the device H.

***Allowable Subject Matter***

6. Claims 7, 8 and 9/8/7 are allowable over the prior art of record.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fletcher et al discloses a temperature compensating inertial sensor.

Hull discloses a method and apparatus for providing two dimensional positioning signals.

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Watson discloses a positioning means which uses a plurality of accelerometers and gyros.

Hojo et al discloses an attitude and heading reference detecting apparatus including accelerometers, gyros and magnetic sensors.

Capper et al discloses a control interface between a machine and a physical object and includes an infrared transmitting means.

Paley discloses a three dimensional mouse with tactile feedback.

Hirabayachi discloses a multidimensional signal input device used with CAD systems and computer graphic systems.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Saras whose telephone number is (703) 305-4718.



Steven J. Saras  
October 1, 1994



RICHARD HJERPE  
PRIMARY EXAMINER  
GROUP 2600